

## **Background and Summary of Net Cost and Payment Rate Considerations**

### **Introduction**

The Electronic Waste Recycling Act of 2003 (SB 20, Sher), as amended, established a variety of measures intended to develop an infrastructure to provide convenient recycling opportunities, reduce the inappropriate disposal of certain electronic products, limit the sale of certain hazardous products in the state, and require notification and/or reporting of product sale and waste management activities.

The most publicly visible aspect of the Act is the covered electronic waste (CEW) recovery and recycling payment system, administered by the Department of Resources Recycling and Recovery (CalRecycle), in partnership with the Department of Toxic Substances Control (DTSC) and the Board of Equalization (BOE). This system is funded through a fee paid by consumers of covered electronic devices at the time of retail purchase, and is operated to compensate authorized collectors and recyclers of CEW through standard payment rates designed to offset the average cost of providing recovery and recycling services.

CalRecycle has the responsibility to evaluate the standard statewide CEW recovery and recycling payment rates every two years and to adjust them as warranted to reflect the average net costs of providing the CEW recovery and recycling services prescribed by the Act. The payment rates have been adjusted only once since the program's operational inception. Presently, any decision to adjust the payment rates must be made by the statutory deadline of July 1, 2012. ***Based on an analysis of data submitted through required industry reporting, as well as stakeholder input and ongoing monitoring of industry trends, program staff is recommending that no change be made to either the recovery or recycling payment rates.***

### **Background Information**

The Electronic Waste Recycling Act of 2003 (Act), commonly referred to as SB 20 [(Sher, 2003), amended by SB 50 (Sher, 2004), and again amended by AB 575 (Wolk, 2005)], established a comprehensive program to finance the end-of-life management of certain (covered) electronic devices. The program is financed through an electronic waste recycling fee paid by consumers at the point of retail sale of new covered devices. These revenues are used to administer the programs established by the Act, including the disbursement of recovery and recycling payments to approved collectors and recyclers of CEW.

CEW are discarded covered electronic devices. Covered electronic devices are defined by statute as video display devices with a screen size greater than four inches that are identified by DTSC after testing determines that they are hazardous when disposed.

Currently, covered electronic devices include:

- Cathode ray tubes (CRT) and CRT-containing devices (including CRT televisions and computer monitors);
- Liquid Crystal Display (LCD)-containing televisions and desktop monitors;
- Laptop computers containing LCD screens;
- Gas plasma display televisions; and
- Personal DVD players.

The Act charges CalRecycle with principle responsibility for administering the financial aspects of the CEW payment system. This includes establishing a rate of payment for the proper recovery (collection, consolidation and transportation) and recycling (receipt, processing and disposition) of CEW generated by consumers in California. The recovery payment rate is currently set in regulation at \$0.16 per pound, and the combined recovery and recycling payment is currently set \$0.39 per pound, effectively setting the recycling payment rate at \$0.23 per pound. CalRecycle makes the combined payment to approved recyclers in response to complete and compliant payment claims that document the “cancellation” of eligible CEW. Approved recyclers are in turn required to make the recovery payment within certain timeframes to approved collectors for all eligible and properly documented CEW transferred from the collector to the recycler.

### **Statutory Authority to Adjust Payment Rates**

The recovery and recycling payment rates were established at the beginning of the program through a combination of statute and emergency regulation. The rates were set through market research, stakeholder input, and California Integrated Waste Management Board (CIWMB) consideration. They remained unchanged from January 1, 2005, when eligible recovery and recycling activities began, until July 2008. At that point, the CIWMB reconsidered the payment rates and determined that an adjustment from a combined \$0.48 per pound to a combined \$0.39 was necessary to better reflect industry’s lower reported costs. CalRecycle, as the successor to the CIWMB’s obligations, has the authority and responsibility to revisit and establish new payment rates, as warranted, every two years. Pursuant to statute, CalRecycle must make any adjustment decisions, if needed, on or before July 1.

Any adjustment to the recovery and/or recycling payment rates will impact the pace at which the fund is expended and will thus affect the long-term solvency of the program. However, the Act dictates that adjustment of the payment rates be guided by the average net cost of collectors and recyclers providing the services that fulfill the intent of the Act, not as a means to budget the fund. Specifically, the following sections of the Public Resources Code (PRC) will guide the CalRecycle’s actions:

*“PRC 42477. (a) On July 1, 2004, or as specified otherwise in Section 25214.10.1 of the Health and Safety Code, and on July 1 every two years thereafter, the board (CalRecycle) in collaboration with the department (DTSC) shall establish an electronic waste recovery payment schedule for covered electronic wastes generated in this state to cover the net cost for an authorized collector to operate a free and convenient system for collecting, consolidating and transporting covered electronic wastes generated in this state....”*

*“PRC 42478. (a) Except as provided in subdivision (b), on July 1, 2004, or as specified otherwise in Section 25214.10.1 of the Health and Safety Code, and on July 1 every two years thereafter, the board (CalRecycle), in collaboration with the department (DTSC), shall establish a covered electronic waste recycling payment schedule for covered electronic wastes generated in this state to cover the average net cost for an electronic waste recycler to receive, process, and recycle each major category, as determined by the board, of covered electronic waste received from an authorized collector....”*

### **Collaboration with DTSC**

As noted above in the statutory citations, CalRecycle is required to make any adjustments to the recovery and/or recycling payment rates in collaboration with DTSC. This collaboration has been accomplished through ongoing coordination and joint implementation of the Act's provisions. Specifically, CalRecycle program staff communicates regularly with DTSC regulatory and compliance staff to discuss program progress and challenges, to ensure participant compliance, and to align programmatic efforts.

Public Resources Code (PRC) 42474.4 empowers DTSC to enforce all aspects of the Act and its implementation using DTSC's hazardous waste management authority. Furthermore, PRC 42476(f)(1) states that CalRecycle may pay an electronic waste recycling and/or recovery payment only if "*...The covered electronic waste, including any residuals from the processing of the waste, is handled in compliance with all applicable statutes and regulations,*" many of which fall under the jurisdiction of DTSC.

DTSC is currently engaged in a rulemaking that will adjust conditions of authorization within certain universal waste rules. This is in response to changing conditions in the market for residual CRT glass and an anticipated need to expand management options. CRT glass management is presently a significant cost concern for CEW recyclers. The economic impact of any rule changes is unclear at this time; however, CalRecycle staff continues to work closely with DTSC regulatory staff to better understand how any new management options for CRT glass will affect overall industry costs.

### **Net Cost Reports Inform Payment Rate Considerations**

To inform the evaluation of payment rates, regulations governing the payment system allow CalRecycle to require that approved collectors and recyclers submit annual Net Cost Reports documenting revenues and costs associated with the management of CEW during the previous calendar year. The latest cycle of reports was due to CalRecycle on or before March 1, 2012.

Specific regulatory language relating to the Net Cost Report can be found in Title 14 of the California Code of Regulations (CCR) section 18660.10. This regulation provides the context for the Net Cost Report requirement, specifically:

*"(a) To adjust the statewide recovery and recycling payment rates, establish future payment schedules and adjust the consumer fees, (CalRecycle) shall periodically update information concerning the net costs of CEW recovery and CEW recycling."*

Given the fact that the nature of participating organizations varies considerably based on size, location, business model, target customer base, scope of materials handled, available markets, and other factors, there is a substantial range of costs and revenues reported. This is to be expected. The industry being fostered by the CEW payment system, while not new, continues to evolve as the collection infrastructure evolves, recycling processes are optimized, and markets for derived residuals fluctuate, and as the CEW payment system itself influences how materials flow and business decisions are made.

## **Net Cost Report Validation**

For several years CalRecycle's electronic waste recycling program has retained the services of the Department of Finance (DOF) Office of State Audits and Evaluations to review the supporting documentation associated with a sampling of submitted Net Cost Reports. This review, conducted onsite at the location of the selected participants, is intended to determine if the revenues and costs reported are substantiated (validated) by available documentation.

The validation exercise is not a standard audit. It involves a records review using procedures agreed upon ahead of time to standardize the outcome. The aim of the exercise is to determine the general accuracy and reliability of the data submitted as part of the Net Cost Report requirement. Validation subjects are selected by program staff on the general grounds that they represent a range of participant sizes and operational models.

Several previous years' Net Cost Report validation exercises made note of vulnerabilities in the reporting process, including:

- A potential to under-report revenue derived from residual sales
- A potential for related businesses to inaccurately report revenues and/or costs
- The need for more specific guidance on report preparation, especially in the area of cost allocation

As a result, CalRecycle has continuously updated and refined its approach to each reporting cycle. This has included:

- Report guidance material to clarify that generally accepted accounting methods should be used in preparation of reports
- Establishment of online reporting capabilities to ease calculations and reduce errors
- Reminders to participants that the submittal of a false report would be considered a prohibited activity

In spring 2012, DOF again performed a review of selected Net Cost Reports submitted for the 2011 operational year. Concerns remain about the ability of reporting entities to accurately account for and allocate costs and revenues. The overall results of the validation exercise were similar to previous years in terms of the degree to which submitted reports are substantiated by available documents and data. The results of these DOF examinations are factored into program's recommendation to leave payment rates unchanged.

## **Findings**

Findings from the Net Cost Reports covering recovery and recycling operations conducted in 2005 and 2006 indicated that initial recovery and recycling payment rates were more than sufficient to cover the reported costs of a majority of program participants. A continuing trend of lowering net costs was identified in the reports covering 2007, arguing strongly for the reduction in payment rates that occurred in 2008. Subsequent years' reporting has argued for the payment rates to remain steady.

An examination of Net Cost Reports covering operational year 2011 is detailed in Attachment 2. Once egregious outlier data are excluded from weighted average calculations, reported costs per pound for 2011 appear to be similar to those reported in the last two reporting cycles, as well as the 2008 report (2007 operations) upon which the previous payment rate reductions were based.

### **Future Uncertainties**

The data contained in the annually required Net Cost Reports is a snapshot of the past. Given the timing of reporting cycles, program staff relies largely on data that reflects operating conditions that may differ from current conditions when making any recommendation regarding payment rates. An examination of past trends in factors that affect costs and revenues reveals that the one certainty is change. The potential exists for substantial changes to occur at any time in costs such as labor, transportation, and facilities, as well as in revenues derived from commodities such as recovered metals, plastics, and components.

By weight, CRT glass is the most significant portion of the treatment residuals derived from the cancellation of CEW. CRT glass has been traditionally used as a feedstock in the manufacturing of new CRT devices, or can be a feedstock to primary or secondary lead smelting, wherein the silica acts as a flux to protect furnaces and the lead in the glass can be recovered. In general these are fairly low value uses, with the material preparation costs often exceeding the commodity value of the CRT glass. There are a limited number of destinations within the western hemisphere that can use CRT glass as a smelter feedstock, and even fewer global destinations that can use CRT glass in the manufacture of new CRTs.

The availability of CRT glass disposition options is likely the most significant uncertainty for current CEW recyclers, and any disruption can have profound impacts. In late October 2009, the USEPA revoked all Acknowledgments of Consent that allowed for the export of CRT glass to processing facilities in Mexico. This was reportedly due to facility permitting concerns on the part of Mexican authorities. These facilities typically had provided relatively low cost outlets for CRT glass with charges in the range of a few cents per pound. California recyclers, who must ship derived CRT glass before submitting payment claims, were abruptly faced with higher cost alternatives that often ranged above ten cents per pound.

In response to the demand for CRT glass outlets, a few recyclers invested in CRT glass processing and beneficiation capabilities of their own, which temporarily relieved them of dependence on other processors and opened up new market opportunities. However, the actual long-term returns on investment in this undertaking are unknown, as are the marginal operating costs when compared to material market value.

While new and existing glass processors have opened or added capacity outside of California, and one of the Mexican facilities was successful in securing authorization to return to service, the future market demand for CRT glass within traditional applications is both uncertain and unfavorable. Because of this, DTSC has embarked on a rulemaking that will change universal waste rules to allow for more downstream management options to be pursued without jeopardizing upstream handling authorizations. However, the costs of alternative CRT glass management options and impacts on the CEW payment system are unknown.

A final uncertainty to note is the increasing proportion of non-CRT devices entering the CEW recycling system. While the economics of recovering (collecting) the variety of non-CRT video displays such as LCD monitors, plasma televisions, and laptop computers may be similar, the costs and values associated with their dismantling (cancellation) varies widely. This creates a situation wherein the one set of payment rates that have served a CEW program handling 99 percent CRT devices will likely be inadequate or inappropriate when applied to a more heterogeneous mix. For the time being, program possesses only summary cost data for CEW recovery and recycling in general and, therefore, is in a position to propose only one set of payment rates.

### **Conclusions and Recommendations**

Data from the most recent Net Cost Report, which is a reflection of the CEW recovery and recycling industry's costs during 2011, does not directly indicate a need to change payments rates. In fact, the reported data, as evaluated by program staff, appear to be generally stable when compared to previous years. However, this is admittedly a look into the past and not necessarily indicative of the future costs that the industry will incur and which the payment rates are intended to, on average, relieve.

There is much potential for continued innovation in CEW collection models, and for increased efficiency in the transactions between collectors and recyclers. The elective practice of recyclers paying collectors more than the required recovery payment rate has continued. And some collectors are known to be paying sources or interim handlers to secure quantities of CEW. This practice, while certainly legal, does not appear to be anticipated by the intent of the Act, which was simply to develop and provide a cost-free and convenient recycling infrastructure. The practice does raise questions about the fundamental dynamics of the CEW recycling system model and whether costs are necessarily contained by market forces seeking increased profit, or whether overall system costs expand to consume available payments.

Because of the relative stability of overall reported weighted average costs, program staff recommends that the recovery and recycling payment rates remain unchanged at this time.

### **Regulatory Implications**

Should program's recommendation of no change to the recovery and recycling payments rates be approved, the existing payment rates will simply remain in place in existing regulation.

### **Contingencies**

Should a future cost or revenue factor change so dramatically as to jeopardize the viability of the CEW recovery and recycling industry, or the fiscal integrity of the payment system, CalRecycle and/or program stakeholders could seek Legislative action to make statutory changes allowing for the payment rates to be revisited more frequently than biennially, either as a one-time action or an ongoing authority. Such a change would require additional resources in order to survey costs and recalculate rates, but it would reduce the perceived risk of setting payments rates for two years when economic volatility is causing anxiety for industry and government interests alike.